



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,141	10/31/2005	Alexander Hauser	RAC0082	2898

832 7590 07/12/2006

BAKER & DANIELS LLP  
111 E. WAYNE STREET  
SUITE 800  
FORT WAYNE, IN 46802

EXAMINER

AHMADI, MOHSEN

ART UNIT	PAPER NUMBER
----------	--------------

2812

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/555,141

Applicant(s)

HAUSER ET AL.

Examiner

Mohsen Ahmadi

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicants' response of 06/22/2006 has been entered in the record and considered. With respect to the rejections under 35 USC 103, the applicants' arguments have been considered but they are not persuasive for the reasons as discussed below. Claims 1-9 are under consideration.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimoto et al. (US Pat. 6,340,640).**

**Regarding claims 1, 2 and 5,** Nishimoto et al. discloses a method of dipping silicon wafer in a mixed solution, wherein etching solution consists of essentially of in percent, 50% concentrated hydrofluoric acid, 69% concentrated nitric acid and 85% phosphoric acid in the proportions of 12 parts by volume, 1 part by volume and 12 parts by volume for a time to obtain a predetermined amount of etching while the mixed solution is maintained at the room temperature then water is added to the above-mentioned 50% hydrofluoric acid, 69% nitric acid and 85% phosphoric acid to lower the concentration (See col. 6 lines, 6-30). The examiner makes note that Nishimoto et al.

Art Unit: 2812

does not explicitly state the percentage ranges for etching solution as requires by claim language. However the examiner also makes note that the percentage ranges is a matter of optimization. It would have been obvious to one of ordinary skill in the art at the time of the invention, to optimize the percentage ranges of Nishimoto et al. and arrive at the claimed limitation. The ranges of an optimization would be within the skill of one of ordinary skill in the art. The determination of the percentage ranges is a matter of optimization. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

**Regarding claim 3**, Nishimoto et al. discloses a method wherein the temperature of etching solution is at a room temperature (See col. 6 lines, 6-21). The determination of the temperature is a matter of optimization. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

**Regarding claim 4**, Nishimoto et al. discloses a method wherein silicon wafers are dipped in an etching solution (See cols. 5 and 6 lines 65-67 and 1-3). The determination of the minutes is a matter of optimization. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

**Regarding claim 6**, Nishimoto et al. discloses a method wherein the silicon wafers are oriented substantially vertically and etching solution has a flow component (See cols. 4 and 14 lines 48-58 and 40-59).

**Regarding claim 7**, Nishimoto et al. discloses a method wherein the silicon wafers are oriented substantially horizontally and etching solution is quiescent (See cols. 14 lines 40-59).

**Regarding claim 8**, Nishimoto et al. discloses a method wherein the silicon wafers are moved through etching solution (See cols. 14 lines 23-31).

**Regarding claim 9**, Nishimoto et al. discloses a method wherein the silicon wafers are polycrystalline (See col. 3 lines 14-18).

### ***Response to Arguments***

***Applicant's Arguments:*** Applicants have stated that the determination of the ranges of the components, as well as the temperature, would not be a mere matter of optimization. Applicants respectfully submit that that is not the test for obviousness. Nothing in Nishimoto et al. suggests nor teaches nor would lead one to attempt to use only the components called for in Applicants' amended claims nor the percentages called for by Applicants. The statements by the Examiner about optimization could be applied to the invention of the light bulb by Edison. Edison performed many experiments to optimize the components of that invention and, when asked, stated that invention was 99% perspiration and 1% inspiration. Applicants respectfully submit that the manner of making an invention

is irrelevant to patentability and that optimization can indeed be part of the inventive process.

**Examiner's Answer:** Applicant's arguments filed 06/21/2006 have been fully considered but they are not persuasive. The Examiner directs the applicant to the cited sections in the previous rejection (See col. 6 lines, 6-30). The examiner makes note that Nishimoto et al. does not explicitly state the percentage ranges for etching solution as requires by claim language. However the examiner also makes note that the percentage ranges is a matter of optimization. It would have been obvious to one of ordinary skill in the art at the time of the invention, to optimize the percentage ranges of Nishimoto et al. and arrive at the claimed limitation. The ranges of an optimization would be within the skill of one of ordinary skill in the art. The determination of the percentage ranges is a matter of optimization. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2812

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohsen Ahmadi whose telephone number is 1-571-272-5062. The examiner can normally be reached on Mon-Fri 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on 1-571-272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MA

06/22/2006



MICHAEL LEBENTRITT  
JURY PATENT EXAMINER